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REPORT OF THE ELECTION LAW COMMITTEE: SUBCOMMITTEE ON NEW VOTING TECHNOLOGY

New York has debated whether to replace its mechanical lever voting machines for many years. Supporters of change have argued that these machines are obsolete and prone to frequent breakdowns. Opponents of change have cited the high cost of conversion and the fact that in recent elections increased attention to maintenance and machine preparation has improved reliability. Congressional reaction to the problems encountered in Florida in the 2000 Presidential Election, as embodied in the Help America Vote Act (HAVA), has accelerated the impetus for change by providing both a federal mandate and a fund which would offset, at least in part, the cost of conversion.

The Subcommittee was charged with the task of considering what new voting technology, if any, New York should adopt. Implicit in its recommendations is the belief that the time for change is now both because of the Congressional mandate and the positive benefits in terms of accessibility and flexibility offered by the new technology. An overriding issue in the deliberation was concern for the security of the voting process. Candidates and voters have a right to be able to verify with their own eyes that votes have been properly cast, recorded and tabulated. The Subcommittee firmly believes that public confidence in elections will not endure if the final arbiters of fairness are technicians reviewing computer code. The Subcommittee is also of the opinion that the conduct of elections should remain a public function subject to the intense scrutiny engendered by partisan elections. This too will help ensure continuing fairness.

Four voting systems are now in use in the United States. Mechanical Lever machines are no longer manufactured and are the technology New York will be replacing. Punch Card Systems were discredited by the much publicized problems in Florida in year 2000. Optically Scanned Paper Ballots may be viable in some jurisdictions but the Subcommittee was concerned that the sheer size and complexity of New York elections made this alternative impractical in this State. This focused our deliberations on Electronic Voting Systems generally and the ATM type touch screen machines specifically. This technology, although offering many benefits, is not a panacea. It has limitations, which the Subcommittee has attempted to address in its recommendations.

I. RECOMMENDATIONS

1. Touch Screen/ATM Type Machines:

The Subcommittee recommends that New York State purchase Touch Screen/ATM Type technology for its next generation of voting machines provided any such device shall contain the following features:

A) A Voter verified paper trail for each vote cast
B) Full handicapped accessibility
C) Capacity for multiple languages
D) Prevents over voting
E) Actively warns against under voting
F) Allows alternative election formats (e.g., IRV, cumulative voting and proportional representation)
G) Meets durability/reliability standards to be developed

A) Voter Verified Paper Trail. Although technologically attractive, ATM type touch screen voting machines, as currently designed, have received significant criticism because of their alleged vulnerability to undetectable software tampering. In recent weeks a growing consensus has been developing, to which the Subcommittee adds its voice, that this problem can and should be addressed by adding to such voting machines an integral contemporaneously voter verified paper ballot, which would be the official ballot. As envisioned the paper ballot would be viewed by the voter through a window thus permitting the voter to verify that the machine has accurately recorded his/her choices. The ballot would not be cast until such verification was confirmed. The voter would never come into physical possession of the paper ballot. A system like this was recently used in the Brazilian national elections. Such a system substantially answers the principal security concern of opponents of such technology which is that the computer and any internal audit features which rely on the programming of the computer may be manipulated to alter the results. It also will help insure voter and candidate confidence in the new technology by providing a physically verifiable proof of the computer's accuracy. Confidence in the system will be further enhanced by mandating that in each election in a defined small percentage of randomly selected ED's (i.e., not more than 5%) the paper ballots should be manually (not optically scanned) counted to verify the accuracy of the computer tabulations. Such manual tabulations should be completed and the results made public within the time periods allowed by statute to contest the results or request a court supervised recount. Of course a candidate may, in an appropriate case, petition the Court for a manual tabulation of all the ballots if he can demonstrate a reasonable basis for such a count. The recommended technology is more expensive than other possible systems such as optical scanners whether polling place or central facility based. The Subcommittee nonetheless recommends it because (i) with the addition of the contemporaneously voter verified paper ballot the principal security issue is addressed, (ii) optically scanning the millions of ballots generated in a New York election would be burdensome and significantly delay the posting of even unofficial results [1] (iii) the ATM type touch screen system is a flexible platform which can be enhanced and modified as improvements are developed and (iv) the ATM type touch screen system will provide

[1] The Subcommittee is also concerned about the reliability of optical scanners especially as they have been used in New York City. Based upon concededly anecdotal reports this technology may be more sensitive to error then the literature on the subject suggests.

faster and more accurate election night returns [2] . The Subcommittee is aware that its recommendation that the ATM type machine be purchased only if it contains a contemporaneously voter verified paper ballot will create a logistics challenge relating to the care and storage of these ballots. It also will introduce into the technology a mechanical feature which may decrease the reliability of the machines. The subcommittee believes however that this is a price which must be paid to preserve the confidence of voters and candidates.

B) Handicapped Accessibility. Advocates for the disabled stress the importance of voting systems which permit the handicapped to participate in the communal act of voting at the polls on Election Day. HAVA (as well as the ADA) also requires that any new voting technology allow this. Proper polling site selection and sensitively designed voting machines address many of these concerns but the difficulty in providing a secret ballot for the visually impaired remains significant. ATM type touch screen voting systems permit the visually impaired to vote without assistance at the polls on Election Day through an audio interface. Competing technologies (e.g., optical scan, punch card, mechanical lever) do not. Any new voting technology for New York must permit full handicapped accessibility.

C) Multiple Languages. Ballots in the three voting rights counties of New York City are available in four languages: English, Spanish, Chinese and Korean. There is some thought that a fifth language, Russian, may soon be mandated. ATM type touch screen technology will permit greater language accessibility, even allowing for inclusion of languages beyond what the Voting Rights Act requires. Language accessibility is also mandated by HAVA.

D) Prevent Over Voting. Over voting – mistakenly voting for more than one candidate - was a major problem in Florida during the 2000 Presidential election and is a major flaw with traditional paper ballots, punch cards and optical scan ballots. ATM type touch screen computer voting technology prevents over voting.

E) Under Vote Warning. Under votes – where the voters does not cast a vote, - may be the result of error or a conscious decision by a voter not to express a preference. The touch screen system can and should be programmed to warn the voter of his/her failure to express a preference for a specific office, and give him or her the opportunity to correct the vote.

F) Allows Alternative Election Formats. Any new voting system should be flexible enough to permit formats other then winner take all elections including IRV (instant runoff voting), cumulative voting and proportional representation. ATM type touch screen voting systems can be programmed to allow this.

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[2] Election night returns should be accumulated in a manner which absolutely assures that the voting data contained in the machine is not corrupted. The voting machines themselves should not be networked and any election night communication of results from remote polling sites to the Board of Elections should be by a one way delivery of data.

G) Durability/Reliability. Although the mechanical lever machines in New York have reached the end of their useful life and may have to be retired to comply with HAVA, on the whole they have been highly reliable and durable. Any new technology, including the ATM type touch screen voting system preferred by the Subcommittee, should be designed to withstand the difficult use, transportation and storage conditions which such equipment will experience in New York City and some upstate and suburban jurisdictions.

2. Full Face Ballot. New York requires that all candidates for each office and all propositions appear on the face of a single ballot. This requirement is incompatible with the current ATM type touch screen voting systems which instead provide a separate computer screen for each office or proposition. The Subcommittee recommends that the legislature repeal the full face ballot requirement. Only two electronic systems incorporate a full face ballot. These systems are roughly 60%[3] more expensive than the recommended technology and have been criticized by disability advocates for presenting difficulties for voters with cognitive disabilities. Yet unless the full face ballot requirement is eliminated New York's choice will be limited to one of these systems. Those who fear that elimination of the full face ballot may decrease voter participation in contests for lesser offices may be assuaged by the requirement that any new technology include an under vote warning. Further the legislature may consider more innovative solutions to such a problem such as changing ballot order (e.g., moving Assembly, State Senate and other lesser offices to the "top" of the ballot).

II. RESERVATIONS

1. Precipitous Action. The Help America Vote Act (HAVA) mandates replacement of New York's existing mechanical lever voting machines[4]. It also will provide federal financial assistance (up to 4K per machine) if Congress fully funds the program[5]. This mandate dovetails with a growing consensus in New York that it is time to replace the existing mechanical lever voting machines. Such sentiment appears to be driven by (i) the age of the machines (40 plus years), (ii) the unavailability of spare parts, (iii) fear that New York may experience a debacle comparable to that seen in Florida in the 2000 General Election and (iv) concern regarding the over count in the 2001 Democratic Mayoral Primary Runoff. Notwithstanding HAVA's mandate and the independent sentiment for change, some argue that change now may be precipitous.

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[3] The electronic systems incorporating the full face ballot will cost approximately 8K per unit substantially more than the anticipated 5K per unit cost for ATM type touch screen machines.

[4] Some argue that New York may comply with HAVA and retain its the mechanical lever machines by providing at each polling place at least one fully handicapped accessible machine in addition to the existing machines. The weight of opinion is to the contrary. It is however beyond dispute that if New York does not act now to replace its existing voting machines it risks loosing its share of the $350M appropriated by Congress for this purpose.

[5] Congress has allocated only $350M to replace all mechanical lever and punch card systems throughout the nation. After all requests have been submitted it is probable that the 4K per machine maximum federal contribution will be reduced on a pro rata basis. It is anticipated that the ATM type touch screen machines will cost approximately 5K per unit.

Despite reservations among academics and election professionals over the security of computerized voting, until quite recently these concerns were ignored by government procurement officials. Even Santa Clara County, California, where debate has been most intense, recently placed an order for touch screen machines which do not include a voter verified paper ballot, albeit with a reservation that if such a security device is ultimately mandated by the State of California the vendor will be required to provide it at no additional cost. California has also recently formed a state commission to study the desirability of requiring touch screen machines to incorporate such a feature. Given the size of New York's potential order (more than 6,000 machines will be needed in New York City alone) and lingering questions regarding security and durability/reliability a case can be made for slowing the procurement process until other jurisdictions which have already purchased touch screen machines are able to provide a solid base of data on their reliability and until integral voter verified paper ballots are effectively incorporated into the design. Arguing against any delay is the HAVA mandate (and possible federal action to compel compliance) and the possibility of loosing federal funds for any conversion not completed by 2006.

2. Testing. New York should conduct its own wide scale testing of any new voting system especially under the rigorous conditions prevailing at many voting sites in New York City. A pilot project to be launched as soon as possible, therefore, should be considered. This need is underscored by the fact that no extensive testing or use of systems containing an integral voter verified paper ballot has been done in the US.

3. Training/Voter Education. Conversion to any new voting system may generate confusion and long lines at the polls. This problem may be exacerbated by a lack of familiarity with computer technology among some voters and poll workers. An essential part of any conversion plan will be the need to develop and adequately fund an extensive voter education program and comprehensive training of poll workers. Absent such training and education any conversion may lead to disaster on Election Day. This was the experience in some Florida jurisdictions during the first election following their abandoning punch card ballots in favor of a computerized system.

III. CONCLUSION

The Subcommittee recommends that New York State repeal the requirement of a full face ballot and that it purchase ATM type touch screen voting machines containing the features delineated above.